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Declan Patrick Kelly

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EXAMINER

VENT, JAMIE J

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/936,185	Applicant(s) KELLY ET AL.	
	Examiner JAMIE JO VENT	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, filed March 31, 2008, with respect to Claim 1 have been fully considered and are persuasive. The final office action of November 1, 2007 has been withdrawn. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection Dieterich et al (US 6,208,643) in view of Lenihan et al (US 6,169,843) in further view of Fujii et al (US 5,898,695).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dieterich et al (US 6,208,643) in view of Lenihan et al (US 6,169,843) in further view of Fujii et al (US 5,898,695).

[claim 1]

In regard to Claim 1, Dieterich et al discloses a method comprising:

- determining the packet arrival time of each packet of a received sequence of information signal packets (TS packets) comprising A/V information using a packet arrival time counter derived from the local System Time

Counter (STC) the received sequence including, at intervals of multiple information signal packets, Program Clock Reference (PCR) information that facilitates locking the local System Time Counter with the Program Clock Reference (PCR) information (Column 2 Lines 45+ describes the determination of packet arrival time and furthermore described in Column 4 Lines 53+ describes the determination of time based on the arrival time counter);

- setting the packet arrival time counter at an arbitrary value before receiving a first information signal packet (Column 9 lines 65+ through Column 10 Lines 1-5 describes the setting of the packet arrival time counted);
- determining a System Time Counter start value (STC-start) by subtracting the number of counts of the local System Time Clock Counter (STC) subtracting this number from the Program Clock Reference (PCR) value to retrieve a System Time Counter start value (STC-start) and appending a Packet Arrival Timestamp (PAT) corresponding to the packet arrival time to each packet information (Column 2 Lines 45+ describes the determination of packet arrival time and furthermore described in Column 4 Lines 53+ describes the determination of time based on the arrival time counter);
 - determining a number of counts of the local System Time Clock Counter between the first and second PAT;

- determining a first Packet Arrival Timestamp (PAT) of the first information signal packet of the sequence and of the first information signal packet comprising Program Clock Reference (PCR) information and

Lenihan et al discloses a system wherein transport stream packets and data streams are analyzed. It is taught the arrival time stamp is generated using the STC and configured and transported in the PCR format (Column 3 Lines 5-32). As seen in Figures 1a-1c the stream contains PCR which represent values of the STC. Each stream containing different STC provides different start times between the various streams. It is further noted in Column 4 Lines 18-67 and Column 5 Lines 1-20 the STC calculation determines the counts between the streams and thereby preventing discontinuity in playback (Column 3 Lines 12-22). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the method to use the method of calculating packet time, as taught by Dieterich et al, and further teach the system to determine the number of counts from the STC between the first and second PAT, as taught by Lenihan et al.

Dieterich et al in view of Lenihan teaches a system wherein the STC provides information regarding start times of the packet; however fails to teach the determining of PAT of the signal packets. It is taught by Fujii et al the ability to determine the PAT of various information signals as seen in Figure 18 and further described in Column 11 Lines 10-37. The ability to determine and apply the PAT of each signal provides for a more efficient processing of data and data storage. Therefore, it would have been

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obvious to one of ordinary skill in the art at the time of the invention to use the method of generating timestamps, as disclosed by Dieterich et al in view of Lenhian, and further teach the system to determine multiple PAT on various information signals, as disclosed by Fujii et al, to allow for the system to properly store and process the data into the system.

[claim 2]

In regard to Claim 2, Dieterich et al discloses a method according to claim 1, describes the method of generating time stamps; however, fails to disclose the received information signal packets with the appended Packet Arrival Time Stamps (PAT) are stored on a recording medium, wherein, in addition the System Time Counter start value (STC-start) is stored as an attribute of the stored sequence. Miyazawa discloses a system wherein the information corresponding to the PAT is received, stored, and used in determining the start value that is stored on the data stream as disclosed in Column 13 Lines 44+ through Column 14 Lines 16-47. The ability to use PAT for timestamp processing provides a more accurate determination of information of the data stream. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the method of generating timestamps, as disclosed by Dieterich et al, and further incorporate the use of PAT to determine time stamps, as disclosed by Cloutier et al.

[claim 3]

In regard to Claim 3, Dieterich et al discloses a method of reproducing a stored real time sequence of information signal packets (TS) comprising A/V information as previously recited in Claim 1, the method comprising:

- running a packet arrival time counter derived from a local System Time Counter (STC (Column 9 Lines 65+ through Column 10 lines 1-5 describes the running of the packet arrival time counter);
- locking the local System Time Counter (STC) to retrieved Program Clock Reference (PCR) information (Column 6 Lines 9+ describes the locking of the STC to retrieve the PCR information);
- temporally storing a number of retrieved information signal packets (Column 4 Lines 48-52 describes the storing of number that are retrieved from the information signal);

[claim 4]

In regard to Claim 4, Dieterich et al discloses a method according to claim 3, characterized by, inserting Program Clock Reference (PCR) information corresponding to the System Time Counter start value (STC-start) (Column 2 Lines 34-62 describes the inserting of the program clock reference information that corresponds to the system time counter).

[claim 5]

In regard to Claim 5, the claim limitations have been recited in Claim 3.

[claim 7]

In regard to Claim 7, Dieterich et al discloses an apparatus for recording a real time sequence of information signal packets (TS packet) comprising A/V information as previously recited in Claim 1, wherein on a record carrier, the serial sequence comprising at intervals of multiple information signal packets, Program Clock Reference (PCR) information for locking a local System Time Counter (STC) with the Program Clock Reference (PCR) information, the apparatus comprising:

- receiving means for receiving the information signal packets (Figure 1 shows the receiving means as described in Column 3 Lines 39-50);
- time stamp generating means for generating a time stamp corresponding to an arrival time of the information signal packets (Column 4 Lines 50+ describes the time stamp generating means for the arrival time of information signal packets);
- writing means for recording the generated time stamps and information signal packets on the record carrier, the time stamp generating means provided with a system time counter locked to the received program clock reference (PCR) information, the apparatus characterized in that, (Column 4 Lines 50+ describes the writing of the generated time stamps on the information signal packet);
- the time stamp generating means are adapted to generate time stamps (Column 5 Lines 1-16 describes the time stamp generator).

[claim 8]

In regard to Claim 8, Dieterich et al discloses an apparatus for reproducing a real time sequence of information signal packets (TS packet) comprising A/V information, such as MPEG2 Transport Stream Packets, recorded on a record carrier with the method as previously recited in Claim 1, the apparatus comprising:

- reading means for reading the information signal packets recorded on the record carrier (Figure 2 the microprocessor reads the information signal packets as further described in Column 4 Lines 10+);
- storing means for temporarily storing a number of information signal packets read from the record carrier (Figure 2 shows storing onto FIFO);
- time stamp generation means comprising a Packet Arrival Time counter derived from a local System Time Counter (STC) (Figure 2 shows time stamp generation as further described in Column 4 lines 50+);
- comparator means for comparing a stored time stamp of an information signal packet with the generated Packet Arrival Time value (Figure 3 shows the comparator as further described in Column 5 Lines 49+);
- outputting an information signal packet from the storing means when a Packet Arrival Time Counter value coincides with the corresponding time stamp (Figure 3 shows the outputting of information signal packet)

[claim 9]

In regard to Claim 9, Dieterich et al discloses a method of storing a real time sequence of information signal packets comprising A/V information, such as MPEG 2 Transport Stream Packets, on a record carrier, the sequence comprising Program Clock

Reference (PCR) information for locking a local System Time Counter (STC),
Presentation Time Stamp (PTS) information for determining the presentation time of the
information comprised in the information signal packets (Column 2 Lines 17+),
Decoding Time Stamp (DTS) information for determining the decoding time of the
information comprised in the information signal packets, and Packet Identification (PID)
mapping information, the method comprising adding mark points at specific entry
points in the sequence, such as I-frames in MPEG2, characterized by, storing in
addition to a mark point one or more of the following information entities: Program
Cock Reference (PCR) information, Presentation Time Stamp (PTS) information,
Decoding Time Stamp (DTS) information, and Packet Identification (PID) mapping
information (Figure 10 as further described in Column 15 Lines 53+ through Column 16
Lines 16-37).

[claims 10]

In regard to Claim 10, Dieterich et al discloses a method wherein entry points includes
I-frames in an MPEG sequence of encoded frames (Column 1 Lines 30-55 describes
the use of MPEG streams within the system. Through the use of MPEG streams into
the system it is known that I frames provide entry points into the MPEG data bitstream
for random access of the data and thereby provides the entry point of the data
described in the system).

[claim 11]

In regard to Claim 11, the claim limitations have been recited in Claim 10.

[claim 12]

In regard to Claim 12, the claim limitations have been recited in Claim 10.

[claim 13]

In regard to claim 13, Dieterich et al discloses a system comprising:

- a receiver that is configured to receive a sequence of information signal packets, the received sequence including, at intervals of multiple signal packets, program clock reference information (Figure 1 system 100 includes a video encoder and for receiving encoded video as further described in Column 3 Lines 40-50),
- a timestamp generator that is configured to provide a packet arrival timestamp corresponding to each information signal packet (Figure 2 counter 230 as further described in Column 4 Lines 53+),
- a combiner that is configured to append the packet arrival timestamp to each corresponding information signal packet (Figure 2 shows the microprocessor that combined and appends PAT information to the information signal), and
- a packet detector that is configured to detect a program clock reference value in a clock referencing information signal packet that includes program clock reference information (Figure 2 as further described in Column 4 Lines 32-53 describes the detector of the clock reference of the signal) wherein
- the timestamp generator is configured to provide a system time start value based on the program clock reference value and a time difference

between the clock referencing information signal packet and an initial information signal packet, and the combiner is configured to associate the system start time with the sequence of information packets (Column 4 Lines 53+ describes the timestamp generator).

[claim 14]

In regard to Claim 14, Dieterich et al a system wherein a writer that is configured to write the sequence of information packets with appended packet arrival timestamps and associated system start time to a recording medium (Column 4 Lines 32-40 describes the controller for writing the sequence of information packets).

[claim 15]

In regard to Claim 15, Dieterich et al discloses a system wherein the sequence of information packets correspond to a sequence of MPEG-encoded packets, and the system start time is recorded as a segment attribute (Column 1 Lines 30-55 describes the use of MPEG streams within the system. Through the use of MPEG streams into the system it is known that I frames provide entry points into the MPEG data bitstream for random access of the data and thereby provides the entry point of the data described in the system).

[claim 16]

In regard to Claim 16, Dieterich et al discloses a system wherein the timestamp generator includes an oscillator, a system counter, operable coupled to the oscillator, that is configured to provide a local clock reference, a phase detector that is configured

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to control an output of the oscillator based on a comparison of the local clock reference to the program clock reference value, and a packet timestamp generator, operable coupled to the output of the oscillator, that is configured to provide the packet arrival timestamps (Column 4 Lines 32+ describes the time stamp and detectors used through the system to provide timestamp generation).

[claim 17

In regard to Claims 17, Dieterich et al discloses a system comprising:

- a reader that is configured to read a sequence of information packets and an associated system start time, each packet of the sequence of information packets including a corresponding packet arrival timestamp, and select packets including a program clock reference value (Column 4 Lines 32+ describes the hardware involved in the reading of information packets);
- a buffer that is configured to store the sequence of information packets, and a controller that is configured to control an output of the buffer to provide the sequence of information packets in a time sequence that is dependent upon the system start time and the packet arrival timestamps (Column 4 Lines 48+ describes the FIFO for storing the information of packets)

- a timestamp generator that is configured to provide a local timestamp for each information packet based on the system start time (Column 4 Lines 52+ describes the information configured for local timestamp) wherein,
- the controller is configured to provide the output of the buffer based on a comparison of the local timestamp and the packet arrival timestamp of each information packet (Column 4 Lines 52+ and Column 5 Lines 1-16 describes the comparison of timestamps).

[claim 18]

In regard to Claim 18, the claim limitations have been recited in Claim 17.

[claim 19]

In regard to Claim 19, the claim limitations have been recited in Claim 17.

[claim 20]

In regard to Claim 20, the claim limitations have been recited in Claim 17.

[claim 21]

In regard to Claim 21, the claim limitations have been recited in Claim 10.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Wasilewski (US 5,420,866).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMIE JO VENT whose telephone number is (571)272-7384. The examiner can normally be reached on 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on 571-272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John W. Miller/
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